



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,670	03/29/2004	Tsugio Okamoto	119259	1162

25944 7590 11/02/2005

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

MORRISON, THOMAS A

ART UNIT PAPER NUMBER

3653

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,670

Applicant(s)

OKAMOTO, TSUGIO

Examiner

Thomas A. Morrison

Art Unit

3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/29/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 12 is objected to because of the following informalities: "maintains height" in line 5 should be -- maintain the height --. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, the recited link mechanism and the recited operation lever are not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant's clarification in the July 21, 2005 response of how the apparatus of the instant application operates is appreciated. However, the specification still does not contain any explanation of which element(s) are considered to be the claimed "operation lever" and which element(s) are considered to be the claimed "link mechanism" in claims 1-16 of the instant application.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 3653

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: (1) the omitted structural relationship in each of the claims 1, 8 and 9, between the operation lever and the power transmission mechanism that allows the driving force to be transmitted by the power transmission mechanism when the lever is in the first state; (2) the omitted structural relationship in each of the claims 1, 8 and 9, between the operation lever and the link mechanism that allows the link mechanism to cut off transmission of the driving force when the operation lever is in the second state; and (3) the omitted structural relationship in each of the claims 1, 8 and 9, between the support unit, the driving unit and the link mechanism that allows the support unit to be disengaged from the driving unit by operation of the link mechanism.

Regarding claim 2, it is unclear what is meant by the recited "one end edges of the sheets of paper".

Regarding claim 9, it is unclear what is meant by the recited "a power transmission mechanism which transmits a driving force, **supplied from external**, to the support unit" (emphasis added).

Art Unit: 3653

Regarding claim 10, it is unclear what is meant by the recited "one end edges of the sheets of paper".

Regarding claim 12, it is unclear what is meant by the recited "driving force is not **supplied from the external**, to the support unit" (emphasis added).

Regarding claim 13, it is unclear what is meant by the recited "a sun gear rotated by the driving force **supplied from the external**" (emphasis added).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 5-9 and 14-16, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,563,535 (Vitu et al.). In particular, the Vitu et al. patent discloses all of the limitations of claims 1, 5-9, 12 and 14-16.

Regarding claim 1, Figs. 1-11 show a paper feed device including
a setting plate (73) on which a plurality of sheets of paper are placed;
a support unit (including 81, 87 and 89) which elevatably supports the setting plate (73), and elevates the setting plate (73) when the support unit (including 81, 87 and 89) receives a driving force;

Art Unit: 3653

a driving unit (including 93 in Fig. 9) which drives the support unit (including 81, 87 and 89) so that a uppermost sheet of paper placed on the setting plate (73) is positioned at a predetermined height for feeding the sheets of paper;

a power transmission mechanism (including 83) which transmits the driving force from the driving unit (including 93) to the support unit (including 81, 87 and 89);

a link mechanism (including 103 and 105) which cuts off the transmission of the driving force to the support unit (including 81, 87 and 89); and

an operation lever (including 19) which is switched between a first state (vertical) and a second state (horizontal), wherein:

when the operation lever (including 19) is in the first state (vertical), the power transmission mechanism (including 83) transmits the driving force to the support unit (including 81, 87 and 89);

when the operation lever (including 19) is in the second state (horizontal), the link mechanism (including 103 and 105) cuts off the transmission of the driving force to the support unit (including 81, 87 and 89); and

the support unit (including 81, 87 and 89) is disengaged from the driving unit (including 93) by an operation of the link mechanism (including 103 and 105).

Regarding claim 5, Figs. 1-11 show that when the operation lever (including 19) is switched from the first state (vertical) to the second state (horizontal), the setting plate (73) goes down due to weight of the setting plate (73). See, e.g., Fig. 9.

Regarding claim 6, Figs. 1-11 show that when the operation lever (including 19) is in the second state (horizontal), a user is capable of stacking additional sheets of paper on the setting plate (73). See e.g., Fig. 9.

Regarding claim 7, Figs. 1-11 show that when the operation lever (including 19) is in the first state (vertical), the operation lever (including 19) is substantially perpendicular to the setting plate (73); and when the operation lever (including 19) is in the second state (horizontal), the operation lever (including 19) is substantially parallel to the setting plate (73).

Regarding claim 8, Figs. 1-11 show an image forming apparatus (Abstract) including

- a paper feed device (including 23 and 25) which feeds a sheet of paper; and
- a recording device (photocopier) which forms an image on the sheet of paper fed from the paper feed device (including 23 and 25), wherein: the paper feed device includes:

- a setting plate (73) on which a plurality of sheets of paper are placed;
- a support unit (including 81, 87 and 89) which elevatably supports the setting plate (73), and elevates the setting plate (73) when the support unit (including 81, 87 and 89) receives a driving force;
- a driving unit (including 93 in Fig. 9) which drives the support unit (including 81, 87 and 89) so that a uppermost sheet of paper placed on the setting plate (73) is positioned at a predetermined height for feeding the sheets of paper;

a power transmission mechanism (including 83) which transmits the driving force from the driving unit (including 93) to the support unit (including 81, 87 and 89);

a link mechanism (including 103 and 105) which cuts off the transmission of the driving force to the support unit (including 81, 87 and 89); and

an operation lever (including 19) which is switched between a first state (vertical) and a second state (horizontal);

when the operation lever (including 19) is in the first state (vertical), the power transmission mechanism (including 83) transmits the driving force to the support unit (including 81, 87 and 89);

when the operation lever (including 19) is in the second state (horizontal), the link mechanism (including 103 and 105) cuts off the transmission of the driving force to the support unit (including 81, 87 and 89); and

the support unit (including 81, 87 and 89) is disengaged from the driving unit (including 93) by an operation of the link mechanism (including 103 and 105).

Regarding claim 9, Figs. 1-11 show a paper feed device including

a setting plate (73) on which a plurality of sheets of paper are placed;

a support unit (including 81, 87 and 89) which elevatably supports the setting plate (73), and elevates the setting plate (73) when the support unit (including 81, 87 and 89) receives a driving force;

a power transmission mechanism (including 83) which transmits a driving force, supplied from external (from 93), to the support unit (including 81, 87 and 89);

a link mechanism (including 103 and 105) which cuts off the transmission of the driving force to the support unit (including 81, 87 and 89); and

an operation lever (including 19), which is switched between a first state (vertical) and a second state (horizontal), wherein:

when the operation lever (including 19) is in the first state (vertical) and the driving force is supplied from the external, the power transmission mechanism (including 83) transmits the driving force to the support unit (including 81, 87 and 89);

when the operation lever (including 19) is in the second state (horizontal), the link mechanism (including 103 and 105) cuts off the transmission of the driving force to the support unit (including 81, 87 and 89); and

the support unit (including 81, 87 and 89) is disengaged from the driving unit (including 93) by an operation of the link mechanism (including 103 and 105).

Regarding claim 14, Figs. 1-11 show that when the operation lever (including 19) is switched from the first state (vertical) to the second state (horizontal), the setting plate (73) goes down due to weight of the setting plate (73).

Regarding claim 15, Figs 1-11 show that when the operation lever (including 19) is in the second state (horizontal), a user is capable of stacking additional sheets of paper on the setting plate (73).

Regarding claim 16, Figs 1-11 show that when the operation lever (including 19) is in the first state (vertical), the operation lever (including 19) is substantially perpendicular to the setting plate (73); and when the operation lever (including 19) is in

Art Unit: 3653

the second state (horizontal), the operation lever (including 19) is substantially parallel to the setting plate (73).

Response to Arguments

5. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection. Applicant's description of how the apparatus of the instant application works is appreciated. Also, applicant's argument for enablement is well taken. There appears to be sufficient disclosure for enablement. However, it is noted that there is insufficient written description in the specification of the instant application to meet the written description requirement, as explained above in greater detail.

Moreover, indefiniteness rejections and prior art rejections of the claims are outlined above.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is (571) 272-7221. The examiner can normally be reached on M-F, 8am - 5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Walsh can be reached on (571) 272-6944. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 3653

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DONALD P. WALSH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600